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| 09/770,762 | 01/25/2001 | Robert A. Wright | 17887004500 | 7760 |

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EXAMINER

LEE, PHILIP C

| ART UNIT | PAPER NUMBER |
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2154

DATE MAILED: 01/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|--|-------------------------------|-------------------------------|--|
| <p align="center">Office Action Summary</p> | Application No. 09/770,762 | Applicant(s) WRIGHT ET AL. | |
| | Examiner Philip C Lee | Art Unit 2154 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23,26 and 29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23,26 and 29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) 6) <input type="checkbox"/> Other: _____ |
|--|--|

1. This action is responsive to the amendment and remarks filed on September 10, 2004.
2. Claims 1-23, 26 and 29 are presented for examination and claims 24-25, 27 and 28 are cancelled.
3. The text of those sections of Title 35, U.S. code not included in this office action can be found in a prior office action.
4. Claim 13 is objected to because of the following informalities and grammar errors, line 10, "sever". Appropriate correction is required.
5. Claim 29 is objected to because it depends from a dependent claim that was cancelled. Appropriate correction is required.

Claim Rejections – 35 USC 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-3 and 8, 10, 13-15, 20, 21 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al, U.S. Patent 6,625,624 (hereinafter Chen) in view of Mathur et al, U.S. Patent 6,704,807 (hereinafter Mathur).

8. Chen and Mathur were cited in the last office action.

9. As per claims 1, 10, 13, 21 and 26 Chen taught the invention substantially as claimed comprising:

a first client having a first proxy (col. 2, lines 59-67; fig. 1), and a first memory (col. 3, lines 20-21); and

a server having a second proxy (col. 2, lines 7-9; fig. 1; col. 3, lines 54-55; col. 5, lines 6-9), a second memory (col. 3, lines 20-21),

wherein the first proxy and second proxy are software modules (e.g. implemented as Java classes) configured to form a communication link with each other (col. 3, lines 29-32, 35-60).

wherein the first client is a Web server (col. 24-25, 47-48) and the server is an executing server (col. 3, lines 54-55).

10. Chen did not teach partitioning the memory into a plurality of slots and each slot being assigned to one of the plurality of processes. Mathur taught comprising:

a plurality of processes, the memory having a plurality of slots, each slot being assigned to one of the plurality of processes (col. 7, line 61-col. 8, line 14) and configured to store data to be transmitted or received by the assigned process (inherently comprised).

11. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Chen and Mathur because Mathur's method of assigning memory slot to a process would increase the reliability of Chen's system by avoiding error due to applications accessing memory outside of their allocated slot (col. 8, lines 5-7).

12. As per claims 2 and 14, Chen and Mathur taught the invention substantially as claimed in claims 1 and 13 above. Chen further taught including:

a second client, wherein the second client is a client of the first client (fig. 1; col. 2, lines 67-col. 3, lines 19).

13. As per claims 3 and 15, Chen and Mathur taught the invention substantially as claimed in claims 2 and 14 above. Chen further taught wherein the second client is a browser in the Web server (col. 2, lines 66-67; col. 3, lines 24-25) (i.e. the proxy which is executing a web server and the client browser can be executed on the same machine).

14. As per claims 8 and 20, Chen and Mathur taught the invention substantially as claimed in claims 1 and 13 above. Chen further taught wherein there are a plurality of the first clients and a plurality of the servers (fig. 1; col. 1, lines 31-36).

15. Claims 4-5, 6-7, 9, 11-12, 16-19, 22-23 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen and Mathur in view of Lanteigne et al, U.S. Patent 6,557,056 (hereinafter Lanteigne).

16. Lanteigne was cited in the last office action.

17. As per claim 9, Chen taught the invention substantially as claimed comprising:
a plurality of browsers (fig. 1; col. 1, lines 31-36);
a plurality of web servers to handle requests from the plurality of browsers (col. 2, lines 7-9; col. 2, lines 63-col. 3, lines 19), each web server having a first proxy (col. 2, lines 59-67; fig. 1), and a first shared memory (col. 3, lines 20-21); and
a plurality of executing servers to communicate with the web servers (fig. 1; col. 2, lines 67-col. 3, lines 19), each executing server having a second proxy (col. 2, lines 7-9; fig. 1; col. 3, lines 54-55; col. 5, lines 6-9), and a second memory (col. 3, lines 20-21),
wherein the first proxy and second proxy are software modules (e.g. implemented as Java classes) configured to form a communication link with each other (col. 3, lines 29-32, 35-60).

18. Chen did not teach partitioning the memory into a plurality of slots and each slot being assigned to one of the plurality of processes. Mathur taught comprising:

a plurality of processes, the memory having a plurality of slots, each slot being assigned to one of the plurality of processes (col. 7, line 61-col. 8, line 14) and configured to store data to be transmitted or received by the assigned process (inherently comprised).

19. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Chen and Mathur because Mathur's method of assigning memory slot to a process would increase the reliability of Chen's system by avoiding error due to applications accessing memory outside of their allocated slot (col. 8, lines 5-7).

20. Chen and Mathur did not teach mark device for indicating whether data can be written or read from the slots by the processes. Lanteigne taught mark devices being assigned to the slots and being operable to indicate whether data can be written or read from the slots by the processes (col. 9, lines 37-42; col. 6, lines 7-36).

21. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Chen, Mathur and Lanteigne because Lanteigne's method of mark device would increase the application's alertness of Chen's and Mathur's systems by providing notification to software application that a message has been enqueued into a receive queue for the particular software application (col. 16, lines 8-11).

22. As per claim 22, Chen taught the invention substantially as claimed for transmitting data in a communication system having a plurality of processes running thereon, comprising:

generating data using one of processes running on the communication system (col. 3, lines 35-60);
storing the data into a shared memory (col. 3, lines 35-60); and
transmitting the stored data to a destination node using a proxy provided in the communication system (col. 3, lines 35-60),
wherein the proxy is operable to maintain a plurality of active communication links simultaneously (col. 3, lines 38-42).

23. Chen did not teach partitioning the memory into a plurality of slots and each slot being assigned to one of the plurality of processes. Mathur taught comprising:

wherein the shared memory has a plurality of slots, each slot being assigned to one of the processes, wherein the data stored in the shared memory is stored in the slot assigned to the process that generated the data (col. 7, lines 61-col. 8, lines 14).

24. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Chen and Mathur because Mathur's method of assigning memory slot to a process would increase the reliability of Chen's system by avoiding error due to applications accessing memory outside of their allocated slot (col. 8, lines 5-7).

25. Chen and Mathur did not teach mark device for regulating the data flow into and out of the slots. Lanteigne taught mark devices being assigned to each of the slots to regulate the data flow into and out of the slots (col. 9, lines 37-42; col. 6, lines 7-36).

26. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Chen, Mathur and Lanteigne because Lanteigne's method of mark device would increase the application's alertness of Chen's and Mathur's systems by providing notification to software application that a message has been enqueued into a receive queue for the particular software application (col. 16, lines 8-11).

27. As per claims 4 and 16, Chen and Mathur taught the invention substantially as claimed in claims 1 and 13 above. Chen and Mathur did not teach input/output space to temporarily store data received/transmitted. Lanteigne further taught wherein each of the first slots, includes:

a first input space to temporarily store data to be transmitted to a destination node via the first proxy, wherein the data is generated by the first process that is associated with the first input space (col. 13, lines 5-31); and

a first output space to temporarily store data received from a source node via the first proxy, wherein the data received is directed to the first process that is associated with the first output space (col. 13, lines 5-31).

28. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Chen, Mathur and Lanteigne because Lanteigne's method of input/output space would increase the flexibility of Chen's and Mathur's systems by allowing different software applications enqueue data at their own speed without significantly impacting other software applications (col. 13, lines 29-31).

29. As per claims 5, 17 and 29, Chen, Mathur and Lanteigne taught the invention substantially as claimed in claims 4 and 16 above. Lanteigne further taught including a plurality of mark devices, each mark device being assigned to one of the first input spaces to indicate whether data can be written into the first input space to which the mark device is assigned and to one of the first output spaces to indicated whether the first output space to which the mark device is assigned contains data received from the source node via the first proxy (col. 9, lines 37-42; col. 16, lines 7-36).

30. As per claims 6, 11 and 18, Chen, Mathur and Lanteigne taught the invention substantially as claimed in claims 5, 10 and 16 above. Lanteigne further taught wherein each of the second slots, includes:

a second input space to temporarily store data to be transmitted to a destination node via the second proxy, wherein the data is generated by the second process that is associated with the second input space (col. 13, lines 5-31); and
a second output space to temporarily store data received from a source node via the second proxy, wherein the data received is directed to the second process that is associated with the second output space (col. 13, lines 5-31).

31. As per claims 7, 12 and 19, Chen, Mathur and Lanteigne taught the invention substantially as claimed in claims 6, 11 and 18 above. Lanteigne further taught including a plurality of mark devices, each mark device being assigned to one of the second input spaces to

indicate whether data can be written into the second input space to which the mark device is assigned and to one of the second output spaces to indicate whether the second output space to which the mark device is assigned contains data received from the source node via the second proxy (col. 9, lines 37-42; col. 16, lines 7-36).

32. As per claim 23, Chen, Mathur and Lanteigne taught the invention substantially as claimed in claim 22 above. Chen further taught wherein the communication system is either a client or a server (30, fig. 1).

33. Applicant's arguments with respect to claims 1-23, 26 and 29, filed 9/10/04, have been fully considered but are not deemed to be persuasive and are moot in view of the new grounds of rejection.

34. In the remark applicant argued that

- (1) the cited references did not teach a proxy as a software module and a first memory having a plurality of first slots.
- (2) the cited references fail to teach the cited features of claim 9.
- (3) the cited references fail to teach the cited features of claim 13.
- (4) the cited references did not teach the cited features of claim 22.
- (5) the cited reference did not teach the cited features of claim 26.

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35. In response to point (1), Chen taught that the first proxy and second proxy could be implemented as software modules (e.g. implemented as Java classes) configured to form a communication link with each other (col. 3, lines 29-32, 35-60).

36. Chen did not teach partitioning the memory into a plurality of slots and each slot being assigned to one of the plurality of processes. Mathur taught comprising:

a plurality of processes, the memory having a plurality of slots, each slot being assigned to one of the plurality of processes (col. 7, lines 61-col. 8, lines 14) and configured to store data to be transmitted or received by the assigned process (inherently comprised).

37. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Chen and Mathur because Mathur's method of assigning memory slot to a process would increase the reliability of Chen's system by avoiding error due to applications accessing memory outside of their allocated slot (col. 8, lines 5-7).

38. In response to point (2), Chen taught the invention substantially as claimed in claim 9 comprising:

a plurality of browsers (fig. 1; col. 1, lines 31-36);

a plurality of web servers to handle requests from the plurality of browsers (col. 2, lines 7-9; col. 2, lines 63-col. 3, lines 19), each web server having a first proxy (col. 2, lines 59-67; fig. 1), and a first shared memory (col. 3, lines 20-21); and

a plurality of executing servers to communicate with the web servers (fig. 1; col. 2, lines 67-col. 3, lines 19), each executing server having a second proxy (col. 2, lines 7-9; fig. 1; col. 3, lines 54-55; col. 5, lines 6-9), and a second memory (col. 3, lines 20-21), wherein the first proxy and second proxy are software modules (e.g. implemented as Java classes) configured to form a communication link with each other (col. 3, lines 29-32, 35-60).

39. Chen did not teach partitioning the memory into a plurality of slots and each slot being assigned to one of the plurality of processes. Mathur taught comprising:

a plurality of processes, the memory having a plurality of slots, each slot being assigned to one of the plurality of processes (col. 7, lines 61-col. 8, lines 14) and configured to store data to be transmitted or received by the assigned process (inherently comprised).

40. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Chen and Mathur because Mathur's method of assigning memory slot to a process would increase the reliability of Chen's system by avoiding error due to applications accessing memory outside of their allocated slot (col. 8, lines 5-7).

41. Chen and Mathur did not teach mark device for indicating whether data can be written or read from the slots by the processes. Lanteigne taught mark devices being assigned to the slots and being operable to indicate whether data can be written or read from the slots by the processes (col. 9, lines 37-42; col. 6, lines 7-36).

42. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Chen, Mathur and Lanteigne because Lanteigne's method of mark device would increase the application's alertness of Chen's and Mathur's systems by providing notification to software application that a message has been enqueued into a receive queue for the particular software application (col. 16, lines 8-11).

43. The cited references did teach the invention substantially as claimed as in claim 9 above.

44. In response to point (3), Chen taught the invention substantially as claimed in claim 13 for transferring data in a communication system having a first client and a server (fig. 1), wherein the first client has a first proxy (col. 2, lines 59-67; fig. 1), and a first shared memory (col. 3, lines 20-21), and the server has a second proxy (col. 2, lines 7-9; col. 54-55; col. 5, lines 6-9; fig. 1), a second shared memory (col. 3, lines 20-21), comprising:

generating, within one of the first processes, a request to be transmitted to one of the second processes (col. 3, lines 8-12);

storing the request into the first shared memory (Note that it is inherent that the generated request must be stored in the first client prior to the proxy establishing a communication link, unless the process is real-time);

transmitting the data stored to the server via the first proxy (col. 3, lines 29-53);

receiving the transmitted request via the second proxy that has a communication link established with the first proxy (col. 3, lines 29-53); and

storing the received request into the second shared memory (Note that it is inherent that the received request must be stored for processing, unless the process is real-time).

45. Chen did not teach partitioning the memory into a plurality of slots and each slot being assigned to one of the plurality of processes. Mathur taught comprising:

a plurality of processes, the memory having a plurality of slots, each slot being assigned to one of the plurality of processes (col. 7, lines 61-col. 8, lines 14) and configured to store data to be transmitted or received by the assigned process (inherently comprised).

46. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Chen and Mathur because Mathur's method of assigning memory slot to a process would increase the reliability of Chen's system by avoiding error due to applications accessing memory outside of their allocated slot (col. 8, lines 5-7).

47. The cited references did teach the invention substantially as claimed as in claim 13 above.

48. In response to point (4), Chen taught the invention substantially as claimed in claim 22 for transmitting data in a communication system having a plurality of processes running thereon, comprising:

generating data using one of the processes running on the communication system (col. 3, lines 35-60);

storing (e.g. caching) the data into a shared memory (col. 3, lines 54-60); and transmitting the stored data to a destination node using a proxy provided in the communication system (col. 3, lines 35-60), wherein the proxy is operable to maintain a plurality of active communication links simultaneously (col. 3, lines 38-42).

49. Chen did not teach partitioning the memory into a plurality of slots and each slot being assigned to one of the plurality of processes. Mathur taught comprising:

wherein the shared memory has a plurality of slots, each slot being assigned to one of the processes, wherein the data stored in the shared memory is stored in the slot assigned to the process that generated the data (col. 7, lines 61-col. 8, lines 14).

50. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Chen and Mathur because Mathur's method of assigning memory slot to a process would increase the reliability of Chen's system by avoiding error due to applications accessing memory outside of their allocated slot (col. 8, lines 5-7).

51. Chen and Mathur did not teach mark device for regulating the data flow into and out of the slots. Lanteigne taught mark devices being assigned to each of the slots to regulate the data flow into and out of the slots (col. 9, lines 37-42; col. 6, lines 7-36).

52. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Chen, Mathur and Lanteigne because Lanteigne's method of mark device would increase the application's alertness of Chen's and Mathur's systems by providing notification to software application that a message has been enqueued into a receive queue for the particular software application (col. 16, lines 8-11).

53. The cited references did teach the invention substantially as claimed as in claim 22 above.

54. In response to point (5), Chen taught the invention substantially as claimed in claim 26 for handling data received in a communication system having a plurality of processes running thereon, comprising:

receiving data from a source node via a first proxy provided in a Web server in the communication system, the first proxy being a software module operable to form a communication link with another proxy remotely residing in an executing server (col. 3, lines 35-60);

storing the received data into a shared memory (col. 3, lines 55-60); and

transmitting the stored data to a process of the executing server to which the data is directed (col. 3, lines 35-60).

55. Chen did not teach partitioning the memory into a plurality of slots and each slot being assigned to one of the plurality of processes. Mathur taught comprising:

wherein the shared memory has a plurality of slots, each slot being assigned to one of the processes, wherein the data stored in the shared memory is stored in the slot assigned to the process to which the data is directed (col. 7, lines 61-col. 8, lines 14).

56. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Chen and Mathur because Mathur's method of assigning memory slot to a process would increase the reliability of Chen's system by avoiding error due to applications accessing memory outside of their allocated slot (col. 8, lines 5-7).

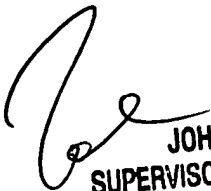
57. The cited references did teach the invention substantially as claimed as in claim 26 above.

58. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip Lee whose telephone number is

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(571) 272-3967. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-9600.

Philip Lee



JOHN FOLLANSBEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100